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THE
CHOLERA PREVENTIVE
BY
A MINISTER
1/-

49.807.

THE CHOLERA PREVENTIVE.

THE ASIATIC CHOLERA;

ITS

PRINCIPAL FEATURES,

AND

Directions

FOR

ITS PREVENTION AND TREATMENT.

BY

A MINISTER.

"If proper remedies are employed at this (the premonitory) period, the progress of the disease is generally and easily checked, and the second stage never comes on."—*Reports of the Sanitary Commissioners.*

LONDON:
PARTRIDGE AND OAKEY, PATERNOSTER ROW.

1849.

"We feel it to be our duty to express a decided opinion, that the present state of the health of the country renders it desirable that the powers vested in the Privy Council by the Cholera Prevention Act be revived and put into operation; and that local Boards of Health be constituted, and authorised to carry into effect all practicable measures of external and internal cleansing; to promote the more effectual execution of the law in respect to the removal of nuisances dangerous to health, and to diffuse information among the people as to the importance of paying immediate attention to the premonitory diarrhœa, as to the proper medicine and the right mode of living to check this the first stage of the disease, and as to the food, drink, and clothing, calculated to put and keep the system in the best health and strength."—*Second Report of the Metropolitan Sanitary Commission*, p. 32, 1848.

Meaden, Printer, Cursitor Street, Chancery Lane.

PREFACE.

It should be stated that the following little work was prepared above six months since, with a view to induce the immediate adoption of precautionary measures, but the idea of its publication was relinquished, from the evident unwillingness of most people to be reminded of a calamity which it was hoped might not be permitted to visit this country.

The presence of cholera among us, and its ravages among all classes, from the poor in their neglected hovels to the judge on the bench, have convinced the author that he ought no longer to withhold from the public that which he has been assured by competent

persons may be the means of saving many lives from destruction, and it is therefore issued in humble dependence on the blessing of "God the Lord (to whom) belong the issues from death."

THE CHOLERA PREVENTIVE.

THE compiler of this little volume lays no claim to acquaintance with the nature and treatment of cholera beyond that which is furnished by the excellent Reports of the Sanitary Commissioners and other documents recently published on the subject. He is however convinced that the instructions collected by the Government ought to receive a wider publicity than they can obtain in the Reports, and a more permanent and ready record than can be secured from the newspapers, in many of which they have appeared; he has therefore collected these instructions, and added his own remarks to simplify them and impress them on the public mind.

The object of the publication is not to supersede the use of medical advice and aid, but to urge the duty of procuring that aid with all possible dispatch, and to point out the steps which may with safety and advantage be taken before it can be obtained.

These remarks apply to the prescriptions which are introduced, and which, as they are intended to be immediately procured and kept in the house ready for use, can be previously submitted to the notice of any medical person.

If these instructions should be considered useful, it is hoped that the reader will impart to his friends and neighbours the benefit of the information he may receive from them, and especially that he should assist the poor to obtain the advantages they are designed to impart.

While it is becoming on our part to recognize that Divine Hand by which men are justly smitten on account of their sins, and to cherish becoming feelings of submission to the divine will, it is equally our duty to endeavour to discover and employ every means placed at our disposal for the preservation of our own lives and the lives committed to our care; and, by timely precaution and preparation, to do what we can for the purpose of guarding against the prevalent calamity.

We may indeed create some uneasiness by directing public attention to this most unwelcome subject, but we feel conscientiously bound to invite that attention before the awful visitant has been permitted to enter our dwellings or attack our own persons.

There are few who have not met with various directions, of more or less value, as to the course which ought to be followed during the prevalence of this awful epidemic; but in most cases these directions have been laid aside, so that they are not forthcoming when wanted. We deem it therefore necessary to employ this means of bringing together the published instructions, which if they are universally regarded, will tend greatly to mitigate the calamity, and in numerous cases preserve valuable lives which might have perished from ignorance or neglect.

It is not too much to assert, that it is the duty c every individual, especially of heads of families, t become acquainted with whatever may be know as to the best method of warding off the attack, c dealing with it after the blow has fallen. There i on the part of many persons too great a dispositio to rely on the help of others, when a little care t obtain information would enable them effectually t help themselves.

PART I.

Considerations which may serve to moderate our Fears in reference to the present Visitation of the Cholera.

THERE are several considerations which will serve in a great degree to allay those fearful apprehensions which cannot but operate injuriously, and which there is no real necessity to entertain. We are in several most important respects in a much more favorable condition for the treatment of this disease than we were at the period of the former visitation. To these favorable circumstances we beg to direct your serious attention.

I. The nature of this epidemic is better understood than when it formerly appeared in this country.

In 1831—2 a new form of disease presented itself amongst us, respecting whose character and causes we had much of speculation, but necessarily no real science. At that time not only had no knowledge been acquired by experience of the true character of this disease, but nothing was known of the real condition of the classes which proved to be its first and easy victims, nor of the state of the localities in which they lived. Since that period, which unhappily fur-

nished abundant opportunities for studying the disease, scientific investigation has been carefully conducted, facts have been collected and classified, and the medical practitioner has no longer to deal with a malady whose nature cannot be discovered.

It is not asserted that there is no difference of opinion among the faculty on this important subject, or that there is the same intimate knowledge of its peculiar character as is possessed of many other diseases; but it is true that there is a remarkable agreement among the profession generally, sufficient to encourage our confidence in their experience and skill.

This disease is now understood to consist of a failure of nervous power, producing universal prostration of the vital energies, and depriving the blood of that vivid and healthy character which it ordinarily obtains by its passage through the lungs. This state seems to be the result of atmospheric conditions, in which there is an unusual deficiency of the electric fluid, and other elements essential to health. This visitation should impress us with a deep sense of our dependence on Him who controls all those wonderful agencies which He has called into being, and who employs them as his "angels" and "ministers," whether for mercy or for judgment.

On this point, the following statement which has lately appeared in most of the papers, may be referred to as deserving of serious attention:—

"*The Cholera.*—In reference to this subject, we have been favoured with the following extract of a letter from St. Petersburg, written by a gentleman

well known in Manchester, to the firm here in
he is a partner :—' A very important discover
been made here very recently, which clearly p
that the malady is in the air, and that, there
quarantines are utterly useless. The air here
had a very singular effect on the magnetic po
Whilst the cholera was at its height, the actio
the magnet was nearly neutralised; which, a
the disease is gradually subsiding, assumes by
grees its former power. A magnet block, wh
used to carry 80 lbs, would, during the worst tim
the cholera, not carry above 13 lbs. Its strength
now increased again to 60 lbs. The electro-magn
telegraph, at one time, would not work at all.' "

The attention of scientific men in different co
tries has lately been, and still is, directed to the s
posed connection between the electrical state of
atmosphere and the prevalence of cholera, and
facts which have been collected go to prove, in a
markable degree, our dependence on the due sup
of the electric element, and the damage result
from a deficiency.

The Metropolitan Sanitary Commissioners st
that the whole of the evidence presented to th
leads to the conclusion, that it is the combinatio
impurity with humidity of the air, which so pow
fully predisposes to cholera; and, in reference to
cause of the disease, they say that "Asiatic cho
appears to be caused by a poison diffused in the
mosphere, which acts with peculiar intensity on
mucous membrane of the alimentary canal.
irritation set up in this membrane, in most case

not violent at first; but if it be allowed to continue unchecked many hours, it produces such a change in the membrane, that the thin colourless portion of the blood is poured out from it, with the same rapidity as it would be if a large opening were made in the great vein of the arm."

Mr. Hodgson of Birmingham, who has paid great attention to this subject, and who, on his examination, drew the attention of the commissioners in a special manner to the important consideration of the means by which cholera might be arrested in its first or premonitory stage, speaking of persons in the second stage, says—

"The immense discharge of serum from the blood reduces them to such a degree, that they rarely rally. To expect them to rally, is like expecting a patient to rally in whom a great blood-vessel in the body has been drained: the material of life has been taken away to such an extent, that few only can sustain it."

"In cholera, the process of secretion and excretion is, to a great degree, arrested; the activity of the whole apparatus of the organic life is enfeebled; a poison, rapid in its action, enters the blood, and so alters its constitution, that its fluid and colourless portion can no longer be retained in its vessels; its thicker constituents and its red particles, progressively, become an inert mass, unable to maintain the circulation: hence the coldness, the shrivelled aspect, the utter prostration, and the other characteristic symptoms."

II. There is also more correct information than was formerly possessed, as to the manner in which cholera is propagated.

On the approach of this epidemic in 1831, an order in council was issued to the following effect:—

"The measures of extreme precaution for the preventing of the introduction of the cholera morbus by a rigorous quarantine have hitherto been found effectual.

"To prevent the introduction of the disorder, not only the most active co-operation of the local authorities along the coast in the measures of the Government, but likewise the exercise of the utmost caution by all the inhabitants of such parts of the country, becomes indispensably necessary.

"The quarantine regulations established by the Government are sufficient, it is confidently hoped, to prevent the disorder from being communicated, through any intercourse with the Continent by the regular channel of trade or passage; but they cannot guard against its introduction by means of the secret and surreptitious intercourse which is known to exist between the coast of England and the opposite shores. By such means, this fatal disorder, in spite of all quarantine regulations and of the utmost vigilance on the part of Government, might be introduced into the kingdom; and as it is clear this danger can only be obviated by the most strenuous efforts on the part of all persons of any influence to put a stop to such practices, their utmost exertions should be used to effect this end."

Proceeding on the assumption that a quarantine,

if preserved with becoming strictness, would be effectual, the "order" stated, "that all intercourse with any infected town and neighbouring country must be prevented by the best means within the power of the magistrates, who would have to make regulations for the supply of provisions; that measures of a coercive nature may be rendered expedient for the common safety, if, unfortunately, so fatal a disease should ever show itself in this country in the terrific way in which it has appeared in the various parts of Europe; and it may become necessary to draw troops, or a strong body of police, around infected places, so as utterly to exclude the inhabitants from all intercourse with the country."

In the same document it was further stated that, "as the most effectual means of preventing the spreading of any pestilence has always been found to be the immediate separation of the infected from the healthy, in order to carry this separation into effect, it will be expedient that one or more houses should be kept in view in each town or its neighbourhood, as places to which every case of the disease, as soon as detected, might be removed, provided the family of the affected persons consent to such removal; and, in case of refusal, a conspicuous mark ('Sick') should be placed in front of the house, to warn persons that it is in quarantine; and even when persons with the disease shall have been removed, and the house shall have been purified, the word ('Caution') should be substituted, as denoting suspicion of the disease; and the inhabitants of such house should not be at liberty to move out or com-

municate with other parties until, by authority of the local board, the mark shall have been removed."

Such precautions were found altogether useless, and are now deemed quite unnecessary. No cordon sanataire drawn around us will arrest the flight of the angel of death. We may as well employ an army to shield us from the east wind, as to try to keep away the cholera by a sanitary cordon.

There is now ample information as to the conditions on which the progress of the disease appears to depend: the influence of moisture and fog in extending it; the inutility of cordons and quarantine regulations in arresting it; the non-extension of the disease through families, in which, the seizure, in the great majority of instances, and, except under peculiar circumstances, is confined to individual members; the inefficacy of isolation in preventing an attack; the general immunity of nurses and other attendants on the affected, however unrestrained the communication; and the greater benefit derived from making proper provision for the assistance of the sick in the ordinary hospitals, or at their homes, than by establishing special cholera hospitals for their reception.

It is clearly ascertained that our apprehensions have to be directed, not against the arrival of vessels having cholera patients on board; not against an approach to persons who may be suffering from the malady and need our help: but against the presence of an atmosphere which is rendered impure by neglected drainage, and the want of proper ventilation and means of promoting salubrity.

"Cholera," says Mr. Robertson, who has reported on the sanitory condition of Manchester, "appears to have generally, in Europe, followed the track of rivers and water-courses; and in cities and towns kept, in a remarkable manner, to the neighbourhood of sewer-mouths. As far as my knowledge of cholera extends, in our Lancashire towns it manifested itself, more than elsewhere, along the water-courses (including docks, wharfs, districts occasionally flooded, &c.) and with peculiar virulence near the outlets of drains. The progress of the disease in Manchester, from first to last, furnishes a comment on this remark. For example, in the New Bailey Prison, which stands within a few yards of the Irwell, there were no fewer than sixty cases; in Allen's Court, situated between Long Mill Gate and the Irk, and near the mouth of a large sewer, out of seventeen seizures, in four houses, fourteen died; in Back Irk Street, in which a number of cases occurred, the only houses visited by the disease were close by the main sewer, which, there, burst into day, and ran above ground; the same remark applies in reference to cases in Little Ireland, on the river Medlock. Where the cholera broke out (as often happened) in places apart from the canals and streams, it was noticed that this, in most instances, was in yards, courts, and narrow streets, polluted by offensive cesspools, pigsties, and other sources of malaria (some of which were too disgusting to be described), or by open or obstructed sewers. In Warrington, where the disease raged destructively, it located itself principally in Bank Street and other neigh-

bouring low streets running to or near the Mersey—the whole quarter so notorious for its filthy sewers, as to receive the name of 'Sewer Island.' In Bolton the number of cases did not exceed fifty; but nearly all of them occurred in closes and entries, adjoining a stream, into which a number of offensive sewers discharged themselves. Perhaps, however, the most striking illustration on record, of the influence of ill-contrived sewerage on the origination of cholera, supposing the epidemic once prevailing, occurred in Liverpool. One morning it was discovered that several men had been seized with cholera, during the preceding night, on board a vessel lying in one of the docks. The men were sent to hospital; and the vessel having been immediately warped into the river, another ship, with a healthy crew, took up her station. The next morning all the hands on board were ill of cholera. *On examining the dock, it was found that a large sewer discharged its contents* UNDER *the spot where the vessel was placed.* I give this most instructive fact on the authority of Dr. Gaulter, an accomplished physician (since deceased), the author of a valuable work on the 'Origin and Progress of Malignant Cholera in Manchester,' published 1833."

Whilst the documents published by the Government show that choleraic poison has been freely propagated in all those districts where drainage was neglected, and filth allowed to accumulate, they show as clearly that places kept free from damp and impurity, and where personal cleanliness and the

general health were attended to, were scarcely even visited with the malady.

It is now universally known that in the metropolis, as in every town and city, the places in which typhus is to be found, from which it is rarely, if ever, absent, and which it occasionally decimates, are the neglected and filthy parts of it; the parts unvisited by the scavenger; the parts which are without sewers, or which, if provided with sewers, are without house drains into them: or which, if they have both sewers and house drains, are without a due and regulated supply of water for washing away their filth, and for the purpose of surface cleansing and domestic use. The evidence that the track of typhus is everywhere marked by the extent of this domain of filth has been so often adduced that it is needless to repeat it; but the evidence that during the prevalence of cholera this was also everywhere the precise track of this pestilence is not so well known. With the steady approach of this formidable malady towards us, it is, in our opinion, of the last importance that public attention should be directed to the evidence of this fact.

The evidence before us states, that "the German colonists in Gallicia, who are distinguished by habits of cleanliness from the Sclavonic population, were also distinguished among the population by an immunity from cholera."

The numerous inquests lately held on persons who have died of this disease in London, and other places, fully illustrate these views, and lead to the

conclusion, that many lives have been sacrificed for want of a pure and wholesome atmosphere.

III. The opinion of the Commissioners that the cholera is *not contagious* ought to be universally known.

The general opinion has been, and even now is, to a great extent the reverse of this; and, in consequence, in many cases those who were seized with the epidemic, during its former visits, were neglected and abandoned by their friends, and died for want of the assistance of which groundless fears deprived them.

The Sanitary Commissioners, in their First Report, say:—

"Every witness examined by us appears to have arrived at the most clear and decided conviction, from what was uniformly observed of its progress in the metropolis, that the disease did not spread from the communication of the infected with the healthy, excepting indeed one witness, Mr. French, who states that he believes cholera to be no more contagious than typhus.

"These witnesses concur in stating that the belief in contagion operated unfavorably both on the sick and the attendants. 'I attended a gentleman,' says Mr. Bowie, 'who died during the second outbreak of cholera, and who was in a state of great alarm during the attack, and for several days preceding it. I likewise attended a captain, the master of a Bridport trader, lying near the Hermitage. Whilst attending one of his boys, whose case was one of great

severity, he used to look down from the deck into the cabin, and declare he would not go into it if all London were to be given to him for doing so. All his crew assisted in waiting upon the boy without suffering from the disease, while the captain, who had never gone near him, was attacked on shore.'"

There is a general abandonment of the theory that this disease is contagious, and the opposite view is justified by a mass of evidence of which the following may be taken as a specimen.

"In Bilston, seven or eight miles distant from Birmingham, with daily and hourly communication going on, by road and canal, between the two places, cholera prevailed more virulently than in any town of the kingdom. The people at Bilston were obliged to send over to Birmingham for coffins, as they could not be made fast enough in that town. The disease also prevailed in the townships around Bilston, but in Birmingham, with its 160,000 inhabitants, there was scarcely a single case of cholera originating in the town; the few cases that occurred there having been imported, especially along the canal, from Bilston; the persons having been clearly attacked by the disease in those localities, and then going to Birmingham, where the symptoms broke forth; but we are informed that, upon a close inquiry, not a single instance could be found where the disease had spread from the infected to the healthy. Birmingham is built, for the most part, high and dry, on a most absorbent red-sand stone, and is, with some exceptions, remarkably exempt from typhus."

The experience of other countries establishes the same position. The physicians of Moscow say—

"It will be seen, by the measures taken to check the disease, that it is not now regarded as exhibiting the same strong contagious principle as was formerly everywhere believed to be the case when it first spread its ravages through Europe. Among all the physicians of Moscow, there is certainly not one who believes that a cholera patient communicates the disease by the touch. Daily experience is too decided on this head. As yet, not a single death has occurred among the numerous physicians occupied in the sickness, or at the dissections connected therewith; and those hospital servants who have been attacked, have doubtless taken the disease from late watching and over-exertion, rather than from infection. It is, consequently, the universal opinion here, that the pestilence is entirely a miasmatic sickness, which, when it has once gained its footing in any district, attacks, indifferently, persons who avoid all contact with the sick, and those who are daily in free communication with them."

In reference to the East Indies we have a corresponding testimony. The representation thus strongly expressed of the decided conviction on this subject of the medical men at present observing and treating Asiatic cholera as it is now prevailing in Russia, is in perfect accordance with the most recent opinion of Indian practitioners. "I have never observed," says Dr. Parkes, "any indication of contagion. In common with the great majority of Indian writers,

my evidence is on the negative side. When cholera prevailed for some months in Tenasserim, and traversed indeed the whole of Eastern Asia, I never heard human intercourse alleged as a means of introduction into any place. The Burmese and Tailiens never considered it contagious, and showed no wish to avoid their relatives when sick, or to omit the customary ceremonies over them when dead. For months, as already said, the disease was raging in one particular part of Moulmein; intercourse between this and other portions was certainly not in the least interrupted on that account, and yet there was no corresponding extension of the disease. No precautions were taken to prevent the European soldiers from going into the bazaar; yet they were not attacked till nine months after its first appearance in the town. The sepoys of two native regiments mixed still more freely with the natives and yet they were untouched throughout."

It should however not be forgotten, that by inattention to suitable means of promoting the healthiness of the apartments in which the sick are confined, we may produce that infection which does not properly belong to the disease.

The following important passage contains the conclusion arrived at by the Sanitary Commissioners as the result of most diligent investigation: "The injurious effects produced by the exhalations from the living body, whether in health or disease, are confined within much narrower limits than was formerly supposed. The rapidity and completeness with which such exhalations are diluted and rendered innoxious

by free admixture with pure atmospheric air, is now better understood than at any former period. Concentrated in confined and crowded apartments, they exercise a most injurious influence on the progress of disease in the sick; concentrated still more they affect the healthy, and under circumstances in which ventilation is neglected, or cannot be efficiently applied and maintained, first the nurses, then the members of the family who may have been only occasionally in the sick chamber, and last of all the medical attendants suffer, at the same time casual visitors are liable to be attacked in proportion to the concentration of the poison, and the weakness and susceptibility of the constitution; and persons so attacked and going to ill-conditioned and confined places may form new centres of disease."

But let it be carefully observed, that in all those cases, the contagion belongs not to the disease when the patient is placed in a clean and well aired apartment, but only when the proper and simple means of ventilation and purity are neglected.

The establishment of this point is of the greatest importance. You need not fear now to attend your friends if they should be seized with this disease, nor discourage their attendance on yourself if you should be attacked. Let proper ventilation and purification be provided and you may render or receive assistance without fear. Indeed the activity and excitement required in attendant relatives or the nurses, may serve a good end in dispelling the depression and fear which are of a most injurious tendency.

IV. The cholera is generally if not always preceded by symptoms which give timely warning for the use of effectual remedies.

The general opinion hitherto has been that this disease differs from most others, not only in its violence and the rapidity of its progress, but in the fact that it gives no premonitory symptoms; that it falls suddenly and without notice, as if the victim were in an instant smitten down by an unseen and unknown power. *This opinion is quite erroneous.*

There are warnings given even by the cholera which are sufficient if attended to without delay, to enable us to resort to treatment which perhaps never fails if adopted in time.

The Sanitary Commissioners have rendered the country the most important service by the clearness with which they have brought forward this feature in the natural history of the cholera, and we are happy in being able to present their views in their own words.

As it is most important that you should be quite satisfied on this point, and as for this purpose you ought to become acquainted with the facts which have led to the conclusion we have above stated, we make no apology for laying before you the principal portion of what the Commissioners have written on the subject.

"It is commonly supposed that Asiatic cholera, of all epidemic diseases, is the most sudden in its attack, as it certainly is the most rapid in its progress; and this opinion is countenanced by the fact that the mortal seizure often takes place when the individual

appears to be in his usual health, and is engaged in the ordinary business of life. A close attention, however, to the early symptoms which denote the invasion of the disease, has afforded indubitable proof that this prevalent opinion is erroneous; that this suddenness of attack is apparent only, and not real; and that before the malady assumes its mortal character, it gives warning of its approach, in general, in time for the employment of efficient remedies to arrest its progress. In the alarm that prevailed during the first invasion of cholera, this warning was not indeed observed or understood; in the novel and difficult position of the medical practitioner during his actual encounter with a malady so new and so formidable, this premonitory symptom did not sufficiently attract and fix his attention; it is only on retracing the history of the disease, and reflecting on the phenomena it presented, that the constancy of the occurrence of this premonitory symptom, and its value as announcing the approach, and even presence of this dreadful malady, while yet there is time to stop its progress, became apparent. It appears to us that the knowledge we have acquired of the general, if not uniform, presence of this premonitory symptom, is the most important practical lesson, especially with reference to individual safety, which our past experience of cholera has taught; and as this subject has not hitherto been elucidated with the distinctness, nor promulgated to the extent which its importance deserves, we think it desirable to state the evidence we have been able to collect respecting it.

"The whole tenor of that evidence shows, that the premonitory symptom of an attack of Asiatic cholera, is looseness of the bowels. This may be accompanied with pain in the bowels, or it may be entirely without pain. The looseness itself may vary from one to three, six or more additional evacuations daily. The evacuations at this period are generally fæcal, and of their natural colour and odour, altogether unlike the discharges at the more advanced stage, when they are rice-coloured and without their natural odour. The pain, if any is present, consists merely of the sensation of griping or uneasiness in the bowels, but the discharges, even when accompanied by this uneasy sensation, produce so little inconvenience, that it is difficult to regard them as indications of illness, much less as the commencement of so terrible a malady. Yet this is the real beginning of the disease, which consists of two stages—first, of this, the stage of simple diarrhœa; and secondly of the stage of collapse, or blue stage, to which alone the name of the disease, Asiatic cholera, is commonly applied, all the symptoms characteristic of the malady being present only in this stage.

"The first stage, or that of simple diarrhœa, may continue from a few hours, to two, three or more days. If proper remedies are employed at this period, the progress of the disease is generally and easily checked, and the second stage never comes on; but if neglected, the second stage commences suddenly, with all the violence which distinguishes this dreadful malady. But this suddenness is merely apparent; the disease has been actually present, and

has been making progress several hours, perhaps days, and it is the second, the violent, the unmanageable, and mortal stage that has really come on suddenly.

"Any deviation then, on the side of looseness, from the natural state of the bowels, during the prevalence of Asiatic cholera, is the real commencement of that disease; a single additional evacuation daily beyond what is natural to the constitution, nay, even a looser state of the daily evacuation must, under such circumstances, be so regarded.

"The view which we have now presented, of the importance of attending to the very first stage of this process, the commencement of which is indicated by any increase beyond the natural discharge from the alimentary canal, is in perfect accordance with Indian opinion and practice.

'It is,' says Dr. Parkes, 'the universal practice in the Indian army, immediately on the occurrence of cases of cholera, to issue orders directing the attention of the non-commissioned officers and men to the importance of attending to any deviation from the ordinary health, and particularly to any symptom of bowel complaint; and it is a positive order that any man so affected should report himself sick. It is always found that many men at such times do, in accordance with this order, report themselves sick, proving the prevalence of such complaints. Many men, however, do not conform to this order, the affection being often so slight and so entirely without pain, that they cannot be induced to regard so apparently trifling an ailment as disease; hence of the

men admitted into hospital, many when seen for the first time present the developed stage of the disease. In the great majority of cases there can be no doubt that this first stage indicated by this premonitory symptom does exist. I witnessed two epidemics, the first, the slightest, in which the premonitory symptom was almost universal. In the second, the disease was more rapid, and appeared, in some cases, to present itself at once in its developed stage. These cases, however, even in India, appear to form an exceedingly small minority.

'With regard to the duration of the premonitory stage in India, I do not think I ever myself witnessed a case in which the diarrhœa had existed longer than four days, and the usual time would in general be only a few hours: that, however, would afford sufficient time for the application of remedies, capable, in the great majority of cases, of preventing the further progress of the disease.'

"The opinion and practice of Russian physicians at the present time are in perfect accordance with their views. In all the accounts that we have recently received, the medical men who are treating the epidemic which is now prevailing, first and prominently urge, 'THAT THE GREATEST ATTENTION MUST BE PAID TO THE DIARRHŒA,' which they say, 'PRECEDES CHOLERA.'

"From advices which we have just received from Constantinople we learn that diarrhœa was prevalent and severe in Trebizond during the whole month of August, before cholera broke out in its Asiatic form early in September, and that in those persons in

whom the disease advanced to this latter stage, diarrhœa was an early and prominent symptom.

"It is notorious that diarrhœa was extremely prevalent in all the towns of the United Kingdom in which Asiatic cholera broke out in 1832, though at that time the observation had not been clearly and generally made that it constantly precedes an attack, and is in fact the actual commencement of the disease. In the detailed accounts of particular cases occasionally transmitted from the Local Boards to the Central Board of Health, constant mention is made of the presence of diarrhœa, often two or three days before the violent attack came on. But, perhaps, one of the most interesting and instructive illustrations of the extent to which this premonitory system is present in a population in which cholera is prevalent is afforded by the remarkable history of the progress and termination of this epidemic at Bilston and the neighbouring district in 1832. This pestilence raged in Bilston with greater violence than in any other part of the United Kingdom. Out of 14,700 inhabitants, 3568 were attacked with cholera, out of whom 792 died in less than seven weeks; that is, one-fourth of the whole population were subjects of the disease, and one-fifth part of those attacked died.

"The Rev. William Leigh, the enlightened and benevolent clergyman of Bilston, whose exertions to mitigate the sufferings of his parishioners during this melancholy visitation were most exemplary and indefatigable, gives the following description of their condition:—

'The pestilence,' he says, 'continues its ravages amongst us in a frightful manner. Our necessities

are increasing every hour, and our resources are fast failing us. Three hundred pounds have been granted to the Board of Health out of the poor-rates; but this sum will not pay for the coffins of the dead. All kind of business is at a stand. Nothing reigns here but want and disease, death and desolation. Two of our medical men have perished; two more have left the place to recruit their exhausted strength; and my respectable neighbours are nearly worn out by mental anxiety and exertion. I have been confined to my house since last Thursday, and nearly the whole of that time to my bed.'

"In this extremity the inhabitants applied to the Privy Council for medical aid, and Dr. McCann, who had seen much of cholera in India, was sent to their relief. The first thing he did was to open a dispensary; to secure the attendance of medical men there night and day, and to placard the town with notices that, whoever was attacked with looseness of the bowels, might receive gratuitously, at this institution, instant advice and relief. Two assistant surgeons, paid by the Board of Health, were in constant attendance, and the resident surgeons of the town, three in number, undertook to visit the institution daily at regular intervals. The dispensary was opened on the 26th of August; on the following day 270 persons applied for relief for bowel complaints; and in the course of eight days the number increased to 1100, all of whom, on their personal application, received the appropriate remedies for such complaints at the institution. The effect was most striking; for it appears from the official Report of Mr. McCann, that in the course of a single week the mortality was reduced one-half.

"I have,' he says, 'the satisfaction to state, that the mortality in Bilston parish from cholera has been reduced during the last week to less than one-half what it was during the preceeding; the number of deaths from that disease during those two periods respectively, as taken from the burial registers, has been as follows:—

From 20th to 26th August 275
From 27th August to 2nd September . 132

'For this happy change, and happy it is comparatively, we are, I have no doubt, mainly indebted to the beneficial influence of the Public Dispensary for the Bowel Complaints; upwards of 1100 personal applications have been made and attended to at that institution, for such affections during the last eight days. From this fact, the public may at once perceive the extent to which disease, and disease, too, connected with cholera, prevails in this district, and at the same time be enabled to form some accurate notions of the advantages to be derived from placing within reach of the poor the means of obtaining prompt and proper relief for bowel complaints in times like the present; for I have no hesitation in saying, that a large proportion of the cases above alluded to would, under existing circumstances here, have passed into cholera if neglected; and that of the cholerics, a large proportion would have died. In all places, therefore, where cholera prevails, or when it is expected, I would again, as I have repeatedly done before, exhort the local authorities to establish without delay, public dispensaries, where the poor, without trouble, or favour, or expence, may receive prompt and effectual treatment for bowel complaints. It cannot, indeed, be too often repeated, that *looseness of the bowels is the beginning of cholera*, and that such looseness *admits of an easy and effectual cure*, whilst cholera itself, or that stage of the disease in which vomiting and cramps, and prostration, are

added, or succeed to looseness, is one of the most fatal and intractable diseases known.'

"The following week Dr. McCann reports:—

'I have again the satisfaction to announce a remarkable decrease in the mortality at this place from cholera: the number of deaths from that disease, in this parish, during the week which has just terminated from the 3rd to the 9th instant, (both inclusive) having been only 44, or one-third of the number (132) which had taken place during the preceding seven days. The number of applicants at the Dispensary also (new cases) for relief for bowel complaints has undergone a sensible diminution during the last few days; but the daily average for the past week (upwards of 130) is sufficient to show that the epidemic influence still prevails amongst us, and to a much greater extent than the cholera reports taken independently would seem to indicate. We have here, therefore, a new proof or illustration of the good effects resulting from such institutions, for although renewed and indefatigable efforts have been made here during the past week to relieve the wants, and add comforts to the poor in other respects, yet no one practically conversant with the subject, can doubt but that all those efforts must have proved, in a great measure, unavailing towards arresting the progress of the pestilence, if measures had not, at the same time, been adopted to extinguish, as it were, in each individual, according as he became affected, the seeds of that cruel malady.

"In nine days from this period, namely, on the 19th of September, the epidemic was extinguished, and, on the same day, the Bilston Board of Health addressed the following letter to the Privy Council:—

'*Board of Health, Sept.* 19.

'The Board of Health are anxious to convey to the Lords of the Council their grateful acknowledgments

for the important and valuable services rendered to the township by Dr. McCann during his sojourn among them. To his unwearied diligence in the discharge of his arduous and perilous duties, to his humane and unremitting attention to the poor, and, above all, to his wise and salutary arrangements for arresting the progress of cholera in Bilston, the Board feel that, under God, they owe, in a great degree, the present favourable change in the condition of the inhabitants; and so fully are the Board convinced of this, that they cannot refrain from expressing most respectfully, their anxious hope, that measures may be adopted, under the sanction of their lordships, for carrying into effect in other places where the pestilence may unhappily prevail, or where its approach may be apprehended, similar arrangements to those from which they themselves, under God's good providence, have derived such signal advantages.

(Signed) 'W. LEIGH, *Chairman.*'

"By similar means, under the same superintendence, a similar result was produced at Wolverhampton, where cholera was prevailing very extensively at the time that Bilston obtained this 'melancholy pre-eminence in suffering.'

"Of the correctness of this account we have received the following confirmation from Mr. Nicholas McCann, who states:—That he is a surgeon, and resides in Parliament Street, and that Dr. Francis McCann, who went down to Bilston, is deceased, and was a relative of his. He died two years ago. He had been in India, and was well versed in the treatment of cholera.

'I was perfectly familiar,' continues this witness, 'with his treatment at the time, and adopted it. Whenever I was called in early enough to take ad-

vantage of the premonitory symptoms, I usually found his treatment successful, never once losing a patient. In the police division, which was under my care, I scarcely lost a man; the order being from me, for an early application upon any disordered or relaxed state of the bowels. Some certainly were lost, where the premonitory stage was not taken advantage of, according to the plan of treatment I pursued. At the period cholera made its first appearance in Westminster, in the years 1831 and 1832, the opportunity then afforded me was extensive, being connected with the largest and only dispensary in the neighbourhood of Parliament Street, and also being surgeon to the metropolitan police.

'From my own observation and experience, I have arrived at the conclusion that, in ninety-nine cases out of every hundred, the premonitory symptoms (in other words, diarrhœa) precedes each and every attack, showing the necessity of making the earliest application for medical aid, and the great danger the patient incurs in neglecting such a necessary precaution.'

"Mr. Hodgson, one of the two medical officers appointed by the Government on the Board of Health at Birmingham, states that, in consequence of his connection with the Cholera Board, he paid great attention at the time to all the circumstances connected with the disease; that—

'The disease raged very much at Bilston, and went on to a frightful extent, till the Government sent down to Bilston Dr. McCann, who had seen a good deal of the cholera in India, and, I believe, in Persia. When Dr. McCann came to Bilston, he formed a cholera dispensary, or dispensary for bowel complaints, and drew attention very strongly to the importance of attending to the premonitory condition.

He told me, and almost everybody whom I have talked with, who knows anything about the subject, confirms it, that they never knew an instance of any person who had the second stage, who had not the premonitory stage, perhaps only to a slight degree. I remember hearing of some ladies being attacked who were out at a party one evening, one of whom was dead the next day; but, even in those instances, if you could learn the particulars, you would find, I believe, that there has been the premonitory stage of diarrhœa to a greater or less extent.'

"This witness being further asked—'Even though there were only one or two motions in the day, you would regard one additional motion as a premonitory symptom,' answers:—

'Any deviation from the usual healthy action of the bowels on the side of diarrhœa, I should regard as the early stage, as it were the blossom of the disease.

'So that, if a person was accustomed to have only one evacuation in the day, in a solid form, and that were changed into a loose state, you would still regard that as a premonitory symptom?—I should.

'Whilst you were watching the cholera in Birmingham, did Dr. McCann's recommendations come to your knowledge?—We were acquainted with what was going on at Bilston; but it was after it was all over that I saw Dr. McCann, and conversed with him upon the subject. I have always felt since that time that, so far as my knowledge of the matter went, that if cholera ever threatened this country again, it would be a very manageable disorder, provided Dr. McCann's ideas were fully explained and acted upon, namely, that cholera consisted of two parts—the premonitory condition, and the condition of collapse; and that if you catch the disease in the premonitory condition, you may stop it at once, but that when it comes to the other condition there is great danger.

'Dr. McCann's proceedings, I verily believe, furnish a key to the management of this terrible malady. I ascribe to Dr. McCann the merit, not of having first said that there is a premonitory stage, and pointing out that part of the history of the disease, but of having insisted upon, and of having drawn particular attention to this point, namely, that there is a stage at which you may stop the disease at once and readily; but if it gets into the other stage, there is no known treatment upon which any reliance can be placed. I conversed with nearly all the medical gentlemen who went to Bilston to attend the cholera patients there, and also with many medical friends residing in the neighbourhood of Bilston, where cholera prevailed, particularly at Wolverhampton, where cholera was fatal in 193 cases, and they unanimously agree in opinion as to the importance and efficiency of Dr. McCann's views and procedings.'

"With regard, therefore, to the means of prevention to be taken by individuals against an attack of cholera, should this pestilence again return, the first and essential precaution is instantly to stop looseness of the bowels. The means of accomplishing this are simple, if the proper remedies are employed IMMEDIATELY THE LOOSENESS COMES ON; and the proper remedies are aromatic, opiate, and astringent medicines; twenty grains of the opiate confection, for example, taken in peppermint-water, weak brandy and water, or the common chalk mixture, and repeated every hour until the relaxation of the bowels ceases.* By this simple remedy, if employed in this early stage, the evidence adduced justifies the ex-

* See the prescription, p. 59.

pectation that the progress may generally be arrested of a malady which, if allowed to advance unchecked to its second stage, is the most fatal and intractable disease known; in the treatment of which the most opposite modes of practice—the most powerful and the most inert remedies—bleeding, brandy, opium, calomel, ammonia, quinine, croton oil, cold water, the warm bath, the cold affusion, all varieties and contrarieties of treatment possible, have been employed alike in vain.

"During the seven days which immediately *preceded* the opening of the dispensary at Bilston, by Dr. McCann, for the treatment of bowel complaints, 309 deaths from cholera were recorded; during the seven days which immediately *followed* the opening of that dispensary, and in consequence of the prompt attention that had been paid during that time to the very commencement of the first stage of the disease, the deaths fell to 139; that is, the mortality was diminished more than one-half in a single week; and from that period the prevalence of the disease continued rapidly to lessen, and the pestilence was totally and finally extirpated in the space of twenty-three days from the first adoption of this plan.

'Wherever,' says Mr. Nicholas McCann, 'I was called in early enough to take advantages of the premonitory symptoms, I usually found Dr. McCann's treatment successful, never once losing a patient. Where only a slight looseness of the bowels existed, with or without pain, he gave at once a small dose of calomel, with rather a large one of opium; if the dejections continued, he administered the chalk mixture, combined with aromatic confection, ammonia,

and tincture of bark; if the contrary effect were produced, namely, constipation, small doses of castor oil were prescribed to regulate the bowels. An embrocation of heated turpentine and laudanum was at the same time rubbed over the chest and abdomen, as a counter-irritant and sedative.

'In carrying out my friend's views and his mode of teatment,' continues Mr. McCann, 'I made a division of cholera into two stages: namely, the premonitory and the collapse, for, unfortunately, but a short period elapses between the one and the other, *particularly if the former be neglected*, which, he said, was always to be known by the sensation of griping or uneasiness in the bowels, accompanied sometimes with one or more evacuations than ordinary.

'I, consequently, taking advantage of his experience, subdivided the two stages, which led me to the following conclusions respecting the premonitory symptoms of cholera:—

'1. That the appearance of true choleric symptoms (vomiting and purging of fluids, neither feculent nor bilious, with cramps and great debility) was preceded, in the majority of cases which have occurred, by a marked relaxation of the bowels, that is, by frequent fluid dejections, constituting the complaint denominated simple diarrhœa.

'2. That this diarrhœa, in a great many cases, presented for a time no peculiar character, so that no medical man could conceive, when called early to a patient labouring under it, whether an attack of cholera was impending or not.

'3. That in other cases the evacuations were, from an early period, more like those which take place in cholera than in diarrhœa (more fluid, whiter, and less feculent), and that this character was assumed, more or less, in many cases, before the invasion of the usual choleric symptoms.

'4. That cases of premonitory disease have been

met with and successfully treated by the ordinary remedies, such as I have before described.

'5. It would appear that in England an attack of cholera has, generally speaking, been preceded by a relaxed state of the bowels, and that the dejections connected therewith have, sooner or later, presented to the medical observer some indications of the danger to which the patient was exposed.

'6. On this account an early attention to bowel complaints of all kinds must, as a measure of precaution, be of the greatest importance to persons located in districts which are infected.'

'I have now by me,' says Mr. Hodgson of Birmingham, 'some of the packets of medicines which were given gratuitously to the poor, and at a small cost to others. Various stations were appointed in the town from which these packets were distributed. Each packet contained three boluses, and each bolus consisted of twenty grains of opiate confection. The patient was directed to take one bolus every hour in a little warm water, or weak brandy and water, until the relaxation of the bowels ceased. Also in each packet there was a small bottle of strong sal volatile, of which a tea-spoonful was to be taken in warm water, frequently, if the patient was cold, faint, or exhausted. Printed directions, as to the use of these remedies and other matters, were enclosed in the packets, and the patients were strongly urged to apply immediately for medical advice.'

"We deem the above to be the most promising evidence, regarding the successful treatment of cholera, of any that we have received; and we therefore present it at the earliest opportunity. In addition to medical treatment, the presence of the premonitory symptom would of course suggest to the intelligent practitioner the necessity of enjoining an immediate

adherence to a strict regimen; together with warm clothing, the avoidance of cold and damp, and the adoption of every means likely to maintain the health and strength in the greatest vigour.

"The following case, the exemplar of thousands and tens of thousands, affords a clear and striking illustration of the mode in which an attack of diarrhœa commonly comes on during the prevalence of cholera, and shows in a manner likely to make an impression upon the mind, the extreme danger, under such circumstances, of delaying, even for a short time, the use of the proper remedies:—

'I must call the attention of my readers,' says the Rev. W. Leigh, of Bilston, 'to the death of Thomas Lee, a miner, aged thirty-nine, a poor but very industrious man. On the morning of Monday he found himself unwell from a relaxation in his bowels, and went to the hospital for advice. The surgeon in charge gave him medicine, with a direction to take it immediately. Having a large family of children to support by his daily labour, and suffering no pain, he said to his wife on his return, "The doctor has given me some physic, but I won't take it till Sunday—I can't spare the time.' She endeavoured to persuade him to do as he had been ordered, but in vain. He continued to go to his work as usual with the bowel complaint upon him, but still without pain. On the Thursday evening, four days from the first attack, he came home for the last time: on the Friday he was seized with cramps and vomiting, and on the Saturday he was buried. I wish this unfortunate case could be known far and wide—it shows so clearly the extreme importance of checking the disease in the beginning. Had not the bowel complaint been neglected, in all human probability the man's life would have been

saved: and the lives of very many more under the same lamentable circumstances. The poor (the error is not confined to the poor) are apt to estimate the amount of danger by the amount of pain, and, so long as pain is absent, they consider themselves safe. This fatal mode of reasoning was too evident at Bilston, and I cannot help attributing the excess of deaths among the lower classes to this rather than their poverty, or habits of living. The difficulty of impressing this truth upon the minds of the poor was not removed till a dispensary had been opened, where they might apply for instant relief free of all cost, in case of any relaxation in the bowels.'

'Suppose I were in charge of the health of a town,' says Mr. Hodgson, 'and the question was asked me, "Here is cholera in this town, what shall we do?" The course I would adopt would be this; I would stick up notices about the town to this effect—"Let every body who has relaxed bowels, or who has had more than one motion in a day, call at the dispensary;" then, when they called, I would advise them to avoid the use of fruits and vegetables, and to attend to the general state of their health, and I would give them aromatic opiates, and in that way I believe we should stop the disease.'

"Dr. McCann himself says:"—

'I neither recommend nor countenance, anywhere, the establishment of *hospitals* for the treatment of bowel complaints, but dispensaries simply, that is to say, stations, where the poor labouring under such complaints may receive, without delay or trouble, or expense, proper advice and treatment, and medicines for the same; and by the word proper, I here mean advice and treatment under the eye of a qualified medical practitioner: for the indiscriminate administration of drugs by ignorant and unprofessional men I hold to be absurd and injurious at all times, and

more especially so in times like the present, when the life of every man whose bowels are unduly relaxed *hangs as it were by a thread* wherever cholera prevails. Nor can any difficulty exist with respect to medical aid, for the country is full of well-educated professional men, ready and willing to devote themselves to any duties, however hazardous or laborious, if they be properly treated. Establish, therefore, and open without delay, a public dispensary; engage medical men, and treat them liberally, but see that they do their duty; and if any difficulties should arise relative to organization and arrangement, an application to the Central Board of Health will, doubtless, procure for you any assistance necessary to remove them.'

"In the advice thus given by this distinguished physician to the chairman of a local Board of Health, which had been established under the immediate apprehension that cholera was about to invade the district in question, we entirely concur.

"Under the circumstances in which the nations of Europe are again placed, with the advance made by cholera on its former track, and with the extraordinary prevalence in this country of the very diseases, namely diarrhœa and influenza, which, in 1832, preceded, in so remarkable a manner, the general outbreak of this pestilence, it appears to us to be highly important that these views and proceedings should be extensively promulgated, and that they should engage in a special manner the attention of medical men."

These symptoms should be regarded as the warnings which God mercifully sends to us, and with which we must not trifle for an instant; as they be-

come louder, the danger is increased, and continues rapidly to increase, until the trifler or the sufferer through ignorance is past hope. The knowledge thus imparted to us, if duly appreciated and turned to account, we cannot but regard as quite adequate to a merciful mitigation of the severity of the disease. It is of immense importance for us to know that whatever be its power, it forewarns us of its approach in sufficient time to enable us to use means which, under God's blessing, will rescue us from the might of the destroyer. *There is comparatively little danger if the first notes of warning are regarded, but the greatest peril if they should be neglected!*

V. Let it also be noticed, that since the former appearance of the cholera, much attention has been directed to the necessity of sanitary regulations, as a means of promoting the public health: and that some improvement has been produced, and more may be anticipated, from the means employed for this purpose.

Unhappily we are not able to say as much on this subject as we should desire. Ignorance and gross selfishness have to a great extent resisted or delayed the progress of improvement, and the unseen visitant has come amongst us under circumstances which add greatly to its force.

At the same time it is true, that we are generally better informed than we were respecting the connexion between general cleanliness and the public health, and some considerable efforts have been made to promote the work of sanitary reform.

Instances are recorded in which improvements have been effected, in general with decided and striking benefit. In the Holywell and Long Alley district, with 500 recorded cases of diarrhœa and typhus, in one particular place, namely, Long Alley, which is a long, narrow, and close passage, crowded with inhabitants, the drainage, contrary to the general rule, has been put in good order, and this place has remained exempt from the disease. Two courts in Whitechapel, that were in an exceedingly damp and filthy condition, and in which fever had prevailed for some time in every house, ceased to be affected with disease on being drained. In Dulwich, fever was arrested by cleaning out drains. In Hammersmith, diarrhœa disappeared in one street after the emptying of a cesspool that had overflowed, a new drain having been built at the same time. In the Acton district no fever is reported, and only two cases of diarrhœa, the external and internal cleansing having been well attended to. In St. George's Hanover Square, the cholera of 1832 prevailed in nineteen streets; of these two were mews; in twelve the sewerage and drainage were bad, but now these are bad only in four; cleansing, which was then bad in seven, is now good in all; paving is now good in all, the water supply having been good then as it is now. In 1847 there were but three cases of typhus in three streets, and sixteen of diarrhœa in six streets where the house drainage is still bad. The whole case of this parish is an example to prove that if drainage and cleansing were properly attended to, the diseases in question would in all likelihood never be heard of.

The cleansing process is now going forward in various places, though there is reason to fear that in some instances this work has been neglected too long, and that it may at first rather increase than remove the evil it is intended to remedy.

PART II.

Directions for the Prevention and Cure of Cholera.

The observations which have been made will perhaps have convinced you of the necessity of receiving suitable instructions as to the course to be followed in the circumstances in which we are placed.

The following instructions were issued by Messrs. Martin, Farre and Toynbee, the gentlemen appointed by our Government to report on the capabilities of the metropolitan workhouses for the reception and treatment of cholera cases.

Mr. Martin, the first of these gentlemen, had very extensive opportunities of observing the disease in India. He originated enquiries into the sanitary state of Calcutta, before any such investigations were set on foot in this country.

The first portion of the "General Suggestions" relate to the use of moral means, and are designed to fortify the mind against injurious impressions. The "Particular Suggestions" relate to the physical means of warding off the disease, or dealing with it in the earlier stages.

GENERAL SUGGESTIONS IN REFERENCE TO CHOLERA.

" 1. Let despondency give place in the public mind to a cheerful and confident pursuit of every man's daily occupations. This is of the utmost importance to health,—a regular, sober, and active mode of life having everywhere been found eminently preservative against cholera.

" 2. Let the notion of the infectious nature of cholera be dismissed. It has not a foundation in ascertained fact in any of the countries visited by the disease.

" 3. Of numberless examples in proof, we would select the following :—

" *a*. That many hundreds of persons have been seized with cholera on its first outbreak, in a city or camp within twenty-four hours; a fact observed in all countries visited by this epidemic, and one totally irreconcilable with its propagation by infection.

" *b*. That very frequently cholera has broken out in places far distant from those in which the disease actually prevailed at the time, no communication whatever existing between the two localities.

" *c*. That many instances have occurred of the disease swooping on a district, station, or town previously free from the disease, disappearing in a few days, and not returning for months or even years.

" *d*. That the cholera has often been observed to select certain parts of districts and cities, and

those generally the overcrowded, low, and damp quarters, committing great ravages there; while other localities, and these generally the elevated and dry, have almost or altogether escaped invasion.

"*e.* That nowhere have quarantine regulations availed in the least degree to avert or retard the progress of cholera.

"*f.* That many cities and towns have been altogether exempt from cholera (as Birmingham and Tain), while it prevailed generally and fatally within a few miles, and in places holding uninterrupted common intercourse, as Bilston near Birmingham, and Inver near Tain.

"*g.* That in the Bengal Presidency, 'of between 250 and 300 medical officers, most of whom saw the disease largely, only three persons were attacked, and only one attack proved fatal; while in the Madras Presidency, during five years of cholera, there died per annum but one medical officer out of seventy-seven.

"*h.* That the subordinate medical attendants on the cholera patients have not been, either at home or in India, attacked by the disease in any greater portion than the medical officers.

"*i.* That ordinary patients in hospital in which cholera is treated, however debilitated by other diseases, are not affected by it in a larger proportion, if in so large, as the healthy out of hospital.

"*j.* That in France 'departments, parishes, towns, and even villages,' have been 'inundated' with immigrants from places 'devastated by the

disease' yet the inhabitants in the former places have remained 'entirely free.'

"*k.* That where several members of a family have been attacked, the disease has occurred so nearly at, or about, the same time in each individual, as to forbid the belief in its propagation from person to person.

"4. Let therefore the panic arising from the notion of infection be dismissed. Such terror predisposes healthy persons to the disease, while by fostering a debasing selfishness, it tends also to deprive the helpless sick of their natural succour.

"5. The natural advantages of an elevated and dry site have been experienced in all the countries visited by cholera, and they are here noted as pointing to a most important natural means of prevention.

"6. Cholera is the most dangerous of diseases, only because of its extraordinary acuteness comparatively—in other words, because it is the most violent in its seizure, and the most rapid in its progress and termination of all known diseases. *Here the loss of an hour may compromise life;* and throughout the disease the most careful and attentive nursing of the sick is of the utmost importance to the cure. Many lives are lost in cholera, through the mere endeavour of the patient to sit or stand erect, so exhausted are the powers of life in the latter stages of this disease."

PARTICULAR SUGGESTIONS IN REFERENCE TO CHOLERA.

"1. We would urge the necessity, in all cases of cholera, of an instant recourse to medical aid, and also under every form and variety of indisposition;

for during the prevalence of this epidemic, all disorders are found to merge in the dominant disease.

" 2. Let immediate relief be sought under disorder of the bowels especially, however slight. The invasion of cholera may thus be readily and at once prevented.

" 3. Let every impurity, animal and vegetable, be quickly removed to a distance from the habitations; such as slaughter-houses, pig-sties, cesspools, necessaries, and all other domestic nuisances.

" 4. Let all uncovered drains be carefully and frequently cleansed.

" 5. Let the grounds in and around the habitations be drained, so as effectually to carry off moisture of every kind.

" 6. Let all partitions be removed from within and without habitations, which unnecessarily impede ventilation.

" 7. Let every room be daily thrown open for the admission of fresh air; and this should be done about noon, when the atmosphere is most likely to be dry.

" 8. Let dry scrubbing be used in domestic cleansing, in place of water-cleansing.

" 9. Let excessive fatigue and exposure to damp and cold, especially during the night, be avoided.

" 10. Let the use of cold drinks and acid liquors, especially under fatigue, be avoided, or when the body is heated.

" 11. Let the use of cold acid fruits and vegetables be avoided.

" 12. Let excess in the use of ardent and fermented liquors and tobacco be avoided.

" 13. Let a poor diet, and the use of impure water in cooking, or for drink, be avoided.

" 14. Let the wearing of wet and insufficient clothing be avoided.

" 15. Let a flannel or woollen belt be worn round the belly.

" N. B.—This has been found serviceable in checking the tendency to bowel complaint, so common during the prevalence of cholera. The disease has, in this country, been always found to commence with a looseness in the bowels, and in this stage is very tractable. It should, however, be noticed that the looseness is frequently unattended by pain or uneasiness, and fatal delay has often occurred from the notion that cholera must be attended with cramps. *In the earlier stage here referred to there is often no griping or cramp, and it is at this period that the disease can be most easily arrested.*

" 16. Let personal cleanliness be carefully observed.

" 17. Let every cause tending to depress the moral and physical energies be carefully avoided; let exposure to extremes of heat and cold be avoided.

" 18. Let crowding of persons within houses and apartments be avoided.

" 19. Let sleeping in low or damp rooms be avoided.

" 20. Let fires be kept up during the night in sleeping or adjoining apartments, the night being the period of most danger from attack, especially under exposure to cold or damp.

" 21. Let all bedding and clothing be daily ex-

posed during winter and spring to the fire, and in summer to the heat of the sun.

" 22. Let the dead be buried in places remote from the habitation of the living.

" By the timely adoption of simple means such as these, cholera or any other epidemic will be made to lose its venom; so true is it that, ,' Internal sanitary arrangements, and not quarantine and sanitary lines, are the safeguards of nations.'

" James Ranald Martin.
Arthur Farre, M.D.
Joseph Toynbee."

Very great skill has been displayed in the treatment of cholera by the physicians of Russia, by whom, under the authority of the government, the following instructions were drawn up for the use of the country people.

" It has been remarked that, just before the appearance of the cholera in any district, the inhabitants are troubled, more than usually, by *diarrhœas and other complaints*, trifling under ordinary circumstances, but which, in the presence of the epidemic, are apt, *if neglected, to degenerate into real cholera cases*.

" It is well known, from the experience obtained in 1830 and 1831, that the cholera is, in itself, generally not contagious, but that it may become so, like some other diseases, if many sick are kept crowded together.

" The cholera has been found to be most destructive in villages situated on low and marshy grounds,

or near bogs and stagnant pools, and particularly where the inhabitants are confined within narrow space, and live unmindful of cleanliness.

"It has been further observed that those dejected in spirits, and easily alarmed, are more subject to cholera than those who live in confidence and are of good courage.

"The preceding remarks having been made, the following are the precautions recommended for observance against cholera:—

"To beware of catching cold, and particularly to protect the stomach from cold, for which purpose to wear a broad belt of cloth or stout flannel upon the skin around the waist; not to lie upon the bare ground, nor to sleep at night in the open air. After sleep or hard labour, when in perspiration, to drink no water, or other beverage, cold; to drink no acid beverage, and never much at a draught; to beware of all things of intoxication; to use light food and moderately; to eat no bread insufficiently baked, no crude vegetables, no unripe fruits, nor meat or fish not perfectly fresh, and to abstain from salted meats and pickled fish that provoke thirst; to keep the person and the dwelling clean, and to allow of no sinks close to the house, to admit no poultry or animals within the house, and to keep it airy by ventilation. Where there are sick let not the place be crowded.

"Notwithstanding the best precautions the cholera may at times break out. The following are its symptoms, and the treatment to be pursued with perseverance and confidence:—

"A person in good health may be suddenly at-

tacked by cholera: at first sickness, the eye-sight dimmed, then, after a shiver and rumbling in the bowels, vomiting and purging, with acute pains below the breast, under the ribs, and on the left side, attended by quenchless thirst. If the patient be not quickly succoured, cramps ensue in the legs and arms, which become of icy coldness; extreme weakness comes on, and a deadly paleness; the whole body becomes cold, then a hiccough, and other signs of approaching death.

"On the appearance of the first symptoms let medical aid be immediately called, but, if that cannot be obtained, the treatment necessary is as follows:—

"1. Let the patient be warmly covered.

"2. Let his whole body be well rubbed with warm vinegar or brandy; likewise his hands and feet and pit of the stomach with clear tar, or, if none can be had, with strong brandy.

"3. Let the patient take, in frequent and small quantities, a warm and light infusion of mint, or of the essence of mint, one or two drops at a time, with sugar.

"4. If there be no abatement of pain or vomiting, a blister of mustard should be applied to the pit of the stomach.

"5. If all the same symptoms still continue, and the patient be of a strong constitution, then apply leeches to the same place, twelve to twenty for an adult, and for children six to ten; but, if of a weak constitution, let no leeches be used without the advice of a physician.

"6. A warm bath, if ready and near, may be used with benefit, otherwise, a vapour-bath may be prepared at home thus:—Heat some stones or bricks, and over them place a bedstead with a netted bottom, upon which let the patient be stretched, well-covered; then throw the vinegar upon the hot stones, whence steam will arise conducive to perspiration, aided by the frictions, which must not be discontinued. For want of this vapour bath, place around and in contact with the patient bags of heated sand or ashes.

"Observations.—During the present epidemic no application have been so efficacious as strong frictions, either with the naked hand, with a cloth, or with a brush, using clean tar, or some other irritant. The essence of peppermint may be used more freely than heretofore prescribed.

"Great care must be observed during convalescence, for the cholera is often followed by typhus fever."

While there is a remarkable agreement in these two classes of instructions, there may still be some difficulty in comparing them so as readily to deduce from them the directions which it will be safest to follow. The instructions of the English Commissioners also will admit of a classification which may render them more serviceable to the general reader. They are therefore reduced to the following plain directions.

I. Observe the following Sanitary Regulations in your Dwelling and its Neighbourhood.

1. It should be remembered that low and marshy grounds, the neighbourhood of bogs and standing pools, are just the places for the cholera to visit and remain for a long time. If you live in such a neighbourhood and have no means to effect its improvement, you should leave it for a healthy locality, until the cholera has passed away from the country.

2. Avoid the neighbourhood of uncovered drains, unless they are carefully and frequently cleansed.

3. "Let every impurity, animal and vegetable be quickly removed to a distance from your habitation; such as slaughter-houses, pigsties, cesspools, offensive privies and all other domestic nuisances."

If you can effect the removal of such nuisances, exert yourself at once to do so, and if you cannot succeed and you value your life leave their neighbourhood.

N. B. These things should be attended to at once, as if left till the cholera is present the bad odour occasioned by the process of removal will increase the evil that ought to be diminished.

4. Let every room be daily thrown open for the admission of fresh air, and avail yourself of the hours of sunshine and of noon, when the air is most likely to be dry.

5. Study great cleanliness in every part of the house, at the same time avoiding damp floors.

6. Let all bedding and clothing be daily exposed during winter to the fire, and during summer to the heat of the sun.

7. Let crowding of persons within houses and apartments be avoided.

8. Avoid sleeping in low and damp rooms.

9. "The particular suggestions" say, "Let fires be kept up during the night in sleeping or adjoining apartments, the night being the period of most danger from attack, especially under exposure to cold or damp."

Of course this direction is intended for the time of danger and alarm from the actual presence of the disease.

10. Do not place much reliance on the use of what are termed disinfectants, such as chlorine, chloride of zinc, nitrate of lead, Ledoyen's fluid, and other so-called disinfectant salts. It appears from the evidence taken by the Sanitary Commission, that these things, however useful in typhus, will not avail in cholera. Some of them will serve to conceal bad odours, and tempt persons to neglect the removal of their causes; in which case they would do harm rather than good. The proper deodorizer and disinfectant is the pure air of heaven.

II. Secondly, attend to your Personal Health.

1. Cultivate a cheerful frame of mind, and go about your usual business with the confident expectation that if suitable means are used, you will, through the Divine goodness, be saved "from the pestilence that walketh in darkness." Remember that the cholera is not infectious. You cannot expect bodily health apart from a healthy state of mind.

2. Let excessive fatigue and exposure to damp and cold, especially during the night, be avoided.

3. Avoid cold drinks and acid liquors, especially under fatigue, or when the body is heated.

4. Avoid the use of cold acid fruits and vegetables.

5. Let ardent spirits be avoided, and fermented liquors used only in great moderation.

6. Let a poor diet, and the use of impure water in cooking and for drink, be avoided.

(This and the preceding rule are most properly associated, as the money wasted in worse than useless drinks would provide an ample supply of wholesome and nutritious food.)

7. Let the wearing of wet and insufficient clothing be avoided. The feet particularly should be kept dry and warm.

8. To protect the stomach from cold, wear a broad belt of stout flannel, which should be frequently changed, next the skin around the waist.

N. B. This has been found serviceable in checking the tendency of bowel complaints, so common during the prevalence of cholera.

9. Let personal cleanliness be carefully observed; and for this purpose the whole body should be sponged once a day in tepid water if cold water should be disagreeable. For this purpose it is not necessary to use much water, nor to have the whole of the person exposed to the cold air at once. Remember that impurities left on the skin are absorbed into the system, where they operate most injuriously.

ON THE APPEARANCE OF THE FIRST SYMPTOMS.

1. Recollect that these symptoms are looseness of the bowels, which may be accompanied with pain, or entirely free from it. The looseness itself may vary from one to three, six, or more additional evacuations daily, of the natural colour and odour; but, at a more advanced stage, they become rice-coloured, and without the natural odour. Fatal delay has often occurred from the notion that cholera must be attended with cramps.

2. Recollect, also, that in the earliest stages of the disease it is often difficult to distinguish between the symptoms of a common bowel attack and those of the cholera. No evil can result from too much attention to the former, while fatal consequences may ensue from the neglect of the latter.

3. On the first appearance of the symptoms described, *i. e.* as soon as you feel uneasiness in the bowels, *apply for proper medical aid. Delay may be death.*

4. Should there be unavoidable delay in obtaining medical assistance, you should take the medicine

directed in the two following prescriptions. First, the anti-cholera pills; and, two hours after, begin to take the anti-cholera powders.

I. *The Anti-Cholera Pills.*

Take 4 grains of calomel,
1 grain of ipecahuana powder.
1 grain of extract of opium,
Made into two pills.

Keep them in the house ready for use, and, to prevent mistakes, write on the box "Anti-Cholera Pills."

Do not give these pills to children, but give instead, in sugar and water, *one* drop of tincture of opium for each year of their age; if under twelve years of age give one grain of calomel, but if above that age the quantity must be increased.

This is a very powerful medicine, and is recommended only because the disease does not admit of delay in the use of effective remedies. It should be remembered that, generally, calomel and opium are medicines which should be employed only under the direction of properly qualified medical persons. If these pills should be rejected by the stomach, you must repeat them until they are retained.

In two hours afterwards take the medicine in the following prescription, which, from its adaptation to the cholera, may be termed the—

II. *Anti-Cholera Powder.*

Take prepared chalk, 1 ounce,
Aromatic confection, 1½ drachm,
Powder of gum-arabic, 2 drachms.

Take a tea-spoonful for a dose in a wine-glassful of milk or water, to which add a tea-spoonful of compound tincture of rhubarb, and ten drops of laudanum.

This dose should be repeated every time the bowels act.

In the case of children the quantity should be diminished, and the laudanum omitted.

N. B. Be sure that you obtain this medicine genuine, as it contains expensive spices, and is too often adulterated, in which case its efficacy is lost.

The patient should *lie down* in bed, and *avoid exertion* as much as possible.

Care should be taken to keep the feet warm by a plentiful supply of warm flannels, and by bottles of hot water.

An embrocation of heated spirits of turpentine should be rubbed over the bowels, the feet, and legs, or a large mustard poultice should be placed on the stomach and bowels.

There is no necessity to deny the use of cold water, for which there will be a violent thirst; indeed some recoveries are said to have followed simply from drinking cold water.

Dr. Justice, who was appointed, in April last, to the charge of the Cholera Hospital in Buttevant, Ireland, and who, for his remarkable success, received the thanks of the Board of Guardians, states that he allowed his patients to drink as much cold water as they wished for, and that he was very sparing in the use of stimulants. He states, as the

result of his observation, the remarkable fact that, "where stimulants were given the consecutive fever was always in proportion to the amount of stimulant administered."

Should the patient advance to the blue stage, the most powerful means must be employed, but from their character they can be safely used only by a properly qualified medical practitioner. The design of these directions is not to entrust the life of the sufferer to unskilful hands, but they are given in the firm conviction that if carefully followed they will assist to save great numbers from this advanced and more dangerous stage of the disease. There may however be extreme cases in which no medical person can be obtained. To meet such cases there are directions in the Russian instructions, already given, and in the following letter of Mr. McCann:—

"The Sanitary Commissioners in their second report, as presented to both Houses of Parliament, having been pleased to speak favourably of my evidence relative to the successful treatment of cholera, I am induced to offer to the public, in the spirit of that evidence, a few remarks as instructions for the prevention and treatment of that disease; and for the sake of brevity I will make the following classification:—

"1. PREVENTION.—I recommend comfortable and nutritious animal food of the solid kind, warm clothing, an attention to regular hours, free ventilation, and cleanliness; also lime-washing the dwellings of the poor. I advise abstinence from spirituous and fermented liquors, from all fruit and raw vegetables,

from all salt fish and oysters—the latter especially—from all excesses which debilitate the constitution; and, above all things, I deprecate the use of strong purgative medicines.

"2. THE EARLY, OR PREMONITORY STAGE, AND ITS TREATMENT.—So far as my observation extended in 1832, I found that spasmodic cholera, with few exceptions, was preceded by certain premonitory symptoms, of which diarrhœa or purging was the most prominent; but which symptom was too often overlooked by the persons labouring under the attack. It therefore becomes of vital importance, now that we apprehend that cholera is taking the same route towards this country that it did in 1832, that every case of purging which may occur should, without loss of time, be arrested in its progress; for so fully convinced am I of the benefits resulting from a prompt attention to bowel complaints, that I believe that the actual choleric symptoms may, in the majority of cases, be thereby prevented. The purging is for the most part accompanied by nausea, and a disposition to vomit, followed by a sense of heat and weight in the stomach, slight cramps in the bowels and legs, great weakness, diminished action of the heart, and coldness of the surface of the body. It is essentially necessary to point out to the public, and more especially to the poor, such remedies for this, the early stage, as are at their command, and at what period of the disease they should be employed. When sickness, with derangement of the bowels is *felt, the patient* (if an adult) should mix a table *spoonful of mustard, or* double that quantity of com-

mon salt in half a pint of warm water, a third part of either to be taken every ten minutes until free vomiting be produced; after the stomach has been well cleared out with more warm water, thirty drops of tincture of opium should be given in a glass of brandy and water, to be followed up with a pill composed of five grains of calomel and two grains of opium; for an adult, small doses of these to be taken at intervals of every two hours until bile is observed to pass in the evacuation; but in the event of children being suddenly attacked with bowel complaints of this kind, I recommend one drop of the tincture of opium for each year of their age, to be given in sugar and water: they are not to take the pills alluded to; but if under twelve years of age, then one grain of calomel is to be given every two hours, until the same effect (the passing of bile) be visible in the evacuations. Families should also have in readiness a mixture of the following form: prepared chalk ½ oz., white sugar 2 lumps, cinnamon powder or aromatic confection 2 drachms, tincture of catechu 1 oz., opiate confection 1 drachm, sal volatile 2 drachms, cinnamon or peppermint water half a pint, of which mixture an adult may take 3 tablespoonfuls after each disordered motion; and children under twelve years of age one tablespoonful. I also strongly advise the use of an embrocation of heated turpentine to be rubbed over the bowels and extremities, to which the addition of one-third part of laudanum would be a most important improvement; should the ingredients of this embrocation not be at hand, mustard *poultices* ought to be placed on the stomach and

bowels. Common wine bottles or stone jars, filled with hot water, and rolled in flannel, are also to be applied to the stomach and feet. If the apartment be at all eligible, the patient should not be removed, but be kept in a perfectly horizontal position, as any attempt to sit upright might prove fatal. The patient will experience a great relief from the cramps by having a bandage tightly tied round the seat of pain. Cramp being one of the most distressing symptoms in the disease, if not moved by the preceding means, I can, from recent experience, speak highly of the internal administration of from two to five drops of chloroform, in a little ginger tea or any warm fluid, as one of the most efficient agents in removing choleric spasm.

"3. THE COLLAPSE, OR BLUE STAGE, AND ITS TREATMENT.—In this stage all the powers of life are apparently suspended, in consequence of the intensity of the liquid evacuations; the cramps increase in severity, and all the symptoms become aggravated. The treatment in this stage is as nearly allied as possible to that of the early stage, as the remedies there prescribed are now to be given more frequently and in larger doses. Here I must call upon the attendants to be unremitting in rubbing in the turpentine embrocation over the body and extremities, and to be prompt in giving to the patients stimulants, such as brandy, or whiskey mixed in hot water, to which may be added a teaspoonful of the tincture of ginger or of capsicum; and if these be not in readiness, they should give one teaspoonful of sal volatile instead, *until reaction be produced.*

"4. The Recovery.—It frequently happens that this stage is ushered in by an attack of fever, when it will become necessary to avoid the use of stimulants, and to have recourse to the common saline draught, cooling drinks, mild diet of the farinaceous kind, such as arrow-root, sago, tapioca mixed with milk. Should the head be affected and the face flushed, cold lotions should be applied and leeches to the temples. In these instructions I have endeavoured to adopt the simplest mode of expression, to suit the understandings of the poorer classes; and, in conclusion, I again wish to impress upon all persons the necessity of paying prompt attention to the slightest approach of diarrhœa, as it may be the means of saving the lives of thousands.

"50, *Parliament Street.* N. M'CANN."

It ought to be universally known that it is much better to treat cholera patients at their own houses than to remove them to hospitals.

The Sanitary Commissioners say:—

"The measure of alleviation chiefly relied on during its last visitation was the establishment of district cholera hospitals; but the experience of the results of these establishments is by no means favourable to their re-adoption, except under particular circumstances and modifications. The prostration of all the vital powers which characterises a severe attack of cholera is often so extraordinary that the mere assumption of the erect position for a few minutes appeared to deprive the patient of the *slightest* chance of recovery. The medical testimony

is uniform in representing the fatigue of removal as highly injurious in great numbers of instances. It is often strikingly so in the advanced stage even of typhus. It not unfrequently happens that when a patient is removed to the fever hospital in an advanced stage of this disease, on opening the door of the carriage in which he has been conveyed he is found dead; and still more frequently it occurs that when he has not actually expired before he reaches the ward, and is placed in bed, he is cold, pulseless, and insensible, and never rallies, notwithstanding all that can be done to restore animation. In typhus this extreme debility does not take place for many days; often not until the end of the second or third week; but in a severe attack of cholera it occurs in two or three hours, and is sometimes present, in its highest degree, before there is time for the medical attendant to reach the bed-side of the patient. This circumstance renders the employment of any remedy which involves exertion, or even slight motion, out of the question. The medical witnesses who have had the greatest experience on this subject give the following statements as the results of their observation:—

" Mr. Bowie is asked,

' What were the public means of alleviation adopted?—Removing the sick to cholera hospitals.

' What was the character of the hospitals that were provided?—They consisted of dwelling-houses, taken *for the purpose* of affording temporary accommodation; *the one that came* particularly under my notice *was very badly* ventilated, and situated in a bad

locality; that is, close to the Hermitage, and near the bone vessels already spoken of.

'What was your impression as to the benefit derived from those temporary hospitals?—That they did no good, but much evil. The cases that were treated, as far as I had an opportunity of observing, at their own houses, however wretched those houses might be, did far better. For example, in the particular hospital to which I have just alluded, of those sick two only out of eleven recovered; whereas out of twenty-one or twenty-four treated at their own houses, only three died. The very fatigue of removal seemed to me to do much harm. I have known the mere circumstance of patients sitting upright in bed in their extremely feeble state, reproduce the worst symptoms of the disease. Some of the commissioners, in the practice of their profession, must have observed a similar result in advanced stages, even of common fever.'

The following articles should be kept ready for use in case of an attack of cholera:—

Extra blankets and plenty of flannel.
Mustard and flour for poultices.
Spirits of turpentine.
Stone jars for hot water for the feet.
Brandy.
The anti-cholera pills and powders.

CONCLUDING ADVICE.

These pages will probably fall into the hands of some one who, in the anticipation of the judgments of the Almighty, is full of anxiety as to the manner in which he should attend to the summons, "Prepare to meet thy God." No wise man will be satisfied to direct his attentions only to the work of preparation for the safety of this frail life, which, after all precautions are taken, must "one day perish," and to neglect the claims of that portion of his mysterious nature which must live for ever in heaven or hell. The will of Lord Lyttleton begins by saying, that the dying nobleman was about to make arrangements only with reference to his outward estate; for at that time he was so occupied with the pains of the body, and efforts to obtain some relief from suffering, that he must be content to leave the soul in the state in which it was found when his last illness came upon him. In many cases, as soon as the fatal pestilence falls, it seems as if we could again hear the Angel of God exclaim, "The time is at hand! He that is unjust let him be unjust still; and he which is filthy let him be filthy still; and he that is righteous let him be righteous still; and he that is holy let him be holy still."

It is quite possible that, although the means of religious instruction are very largely furnished in our country, as compared with other lands, the readers of this little manual may, in some cases, have to propose *the important question*, "What must I do to be saved?" *Having afforded you the* best available answer to this

inquiry if made in reference to the body, we cannot conclude more appropriately, than by answering the grand question when made in reference to the soul.

We would endeavour to dispel the illusion, that it is in the power of any human arm to save the soul from death. Too general is the notion, that by sending at the eleventh hour for the minister of religion, some rites may be performed, or some prayers offered, by which the great interests of eternity may be snatched from perdition. It must be obvious, to say nothing of the impiety of postponing the claims of religion to such a season, that, in many cases, those who practise this delusion on themselves, will in vain seek for the assistance on which they have relied. The ministers of religion will not be able in every case, even if they should be willing, to respond to the calls which may be made upon them for this kind of help. They will be engaged, it may be, with others in the same state, and many must necessarily be obliged to leave this world unaided by their ministrations; so that the benefit anticipated from such aids, whatever it may be, will in many instances be inaccessible.

You should therefore, at the present time, understand the way in which you may enter into life eternal. Jesus Christ is emphatically "the Saviour." "The Son of Man came to seek and to save that which is lost." You may, and if you compare yourself with God's holy and perfect law you will, feel that you are a sinner; but the gospel announces to us that "the blood of Jesus Christ cleanseth from all *sin*." Your sins may be so numerous, and so heinous,

that you would not whisper your confession into the ear of man; but Jesus Christ searcheth the heart and trieth the reins, and he is prepared to say to the most desperate transgressor, "Thy sins, which are *many*, are all forgiven thee; go thy way and sin no more." The good news (the gospel) is, that "there is no condemnation to them that are in Christ Jesus, who walk not after the flesh but after the spirit." If from your indulgence in sinful practices or sinful thoughts hitherto, you feel that, even if all your sins were now forgiven, it would be a vain thing for you to receive the commandment, "Sin no more:" then, we have the pleasure of being able to tell you, that the gospel, which proclaims pardon to the guilty, at the same time furnishes the means of purification to the moral nature of the unholy and the unclean. Christianity reveals not only the altar of sacrifice, where the penitent may be sprinkled with the blood of atonement, but also the laver of purification, where he may obtain personal purity. Understand, then, that the truths of the gospel, if you rely on Christ for the pardon of your sins, will, as you study and believe them, be the instruments for the sanctification of your nature. The prayer of Christ for his disciples was this:—"Sanctify them through thy truth; thy word is truth." That truth has been recorded by the Holy Ghost, and by the same Spirit it will be engraven on the tablet of every heart which is dedicated by faith to the Lord Jesus Christ. If then the gospel becomes a lamp to your feet and a light to your path, you will find the ways which are ways of pleasantness, and the paths which are peace.

In answer to the question, What shall I do to be saved? the reply of the apostle Paul is simply, "Believe on the Lord Jesus Christ and thou shalt be saved." "Only believe; all things are possible to him that believeth." Faith is that exercise of the mind by which we lay hold of everlasting life. If we are to be saved by works, it is only by the works of Christ; and if we trust in Him, as did the apostle Peter when he cried, "Lord save, I perish," we shall receive as a free gift those blessings, which we are unable to obtain by purchase or merit of our own.

Before the period of alarm shall arrive, let these great subjects receive your careful study. "Forsake not the assembling of yourselves together, as the manner of some is," but learn enough of the religion of Jesus Christ to guide your footsteps aright, and enable you to minister to the instruction and salvation of others around you. "Search the Scriptures." "Seek ye out of the book of the Lord and read."

Careful regard to these great themes will not unfit you for using the proper means for the preservation of your natural life; but will, on the other hand, surely produce that true moral courage which, in the crisis of danger, is of the greatest value to the individual, to the family, and society. "Righteousness tendeth to life." Come what may, "no evil shall befall the righteous." The writer is anxious to see his countrymen prepared to live or die; or, rather, in that state of security, in reference to which the

Saviour says, "Whosoever liveth and believeth in me shall never die."

To such a person the language of the 91st Psalm is perfectly applicable, and with that language we close this address.

4. "He shall cover thee with his feathers; and under his wings shalt thou trust: his truth shall be thy shield and buckler.

5. "Thou shalt not be afraid of the terror by night; nor for the arrow that flieth by day;

6. "Nor for the pestilence that walketh in darkness; nor for the destruction that wasteth at noonday."

FINIS.

Meaden, Printer, Cursitor Street, Chancery Lane.